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Demographic Differences in Sport Performers' Experiences of Organizational Stressors

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### Abstract

Organizational stressors are particularly prevalent across sport performers' experiences and can influence their performance, health, and well-being. Research has been conducted to identify which organizational stressors are encountered by sport performers but little is known about how these experiences vary from athlete to athlete. The purpose of this study was to examine if the frequency, intensity, and duration of the organizational stressors that sport performers encounter vary as a function of gender, sport type, and performance level. Participants ( $n = 1277$ ) completed the Organizational Stressor Indicator for Sport Performers (OSI-SP; Arnold et al., 2013) and the resultant data was analyzed using multivariate analyses of covariance (MANCOVAs). The findings show that demographic differences are apparent in the dimensions of the goals and development, logistics and operations, team and culture, coaching, and selection organizational stressors that sport performers encounter. More specifically, significant differences were found between males and females, between team and individual based performers, and between performers competing at national or international, regional or university, and county or club levels. These findings have important implications for theory and research on organizational stress, and for the development of stress management interventions with sport performers.

*Keywords:* athletic, demands, indicator, measurement, occupational, stress

### Demographic Differences in Sport Performers' Experiences of Organizational Stressors

Participation in competitive sport is typically accompanied by numerous stressors, which can attenuate not only athletes' preparation for and performance in competitions (Gould, Guinan, Greenleaf, Medbery, & Peterson, 1999) but also their health and well-being (Noblet, Rodwell, & McWilliams, 2003; Tabei, Fletcher, & Goodger, 2012). Although these stressors may be of a personal or competitive nature (see, e.g., Kihl, Richardson, & Campisi, 2008; Mellalieu, Neil, Hanton, & Fletcher, 2009), sport psychology researchers have found that organizational stressors (i.e., the demands associated with the organization within which an individual is operating) are particularly prevalent across performers' experiences (Fletcher, Hanton, & Mellalieu, 2006; Fletcher, Hanton, Mellalieu, & Neil, 2012). To illustrate how predominant and pervasive this type of stressor is, Arnold and Fletcher (2012b) identified 640 distinct organizational demands that had been encountered by a total of 1809 sport performers. These stressors were extracted from 34 studies and subsequently organized into a taxonomic classification of four main categories: leadership and personnel issues (e.g., the coach's behaviors and interactions, external expectations), cultural and team issues (e.g., communication, team atmosphere and support), logistical and environmental issues (e.g., facilities and equipment, selection), and performance and personal issues (e.g., injuries, career transitions).

It is clear from Arnold and Fletcher's (2012b) research synthesis that although we know a lot about which organizational stressors are encountered by sport performers, we know little about how these experiences vary from athlete to athlete. This is a worthwhile line of research inquiry because an understanding of how individuals' stress experiences differ will advance theory in the area. To elaborate, the meta-model of stress, emotions, and performance (Fletcher & Fletcher, 2005; Fletcher et al., 2006; Fletcher & Scott, 2010) stipulates that in addition to the

processes of perception, appraisal, and coping mediating the relationships between stressors and responses, feeling states, and outcomes, various characteristics moderate the ongoing stress process. To explain the latter point, personal and situational characteristics (e.g., goal hierarchies, self-confidence, culture, social support) can act as buffers or exacerbates of the relationship between a person and his or her surrounding environment or between an individual's emotions and resultant performance (Fletcher et al., 2006). Specifically, as Fletcher et al. (2006) explain, these characteristics can account for variance in the consequences of the stress process by impacting a performer's resilience or vulnerability to the stressors they encounter, meaning that events deemed stressful for one person might not be for another individual. Therefore, by examining if demographic differences in performers' characteristics influence the genesis and dimensions of organizational stressors that athletes encounter, theoretical proposals presented in the meta-model can be tested. An understanding of demographic differences is also pragmatically important because it will enable applied practitioners to develop more appropriate interventions for performers (cf. Rumbold, Fletcher, & Daniels, 2012).

The omission of demographic differences in the organizational stress literature can perhaps be explained by researchers typically recruiting relatively homogenous samples, of either male *or* female participants (see Table 1), of performers competing within the *same* sport (see Table 2), or of performers competing at the *same* level (see Table 3). To examine the differences between performers' stress experiences, researchers should carefully consider the sample they select and ensure that it represents a diversity of sport performers. There are some stress researchers that have, within the same study, attempted to sample in a more representative manner by selecting both male and female participants (see Table 1), performers from different sports (see Table 2), and performers who compete at different levels (see Table 3). However,

although these studies have recruited a more diverse group of participants and identified the stressors that the sample as a whole has encountered, they have not explicitly investigated demographic differences in the experiences of these stressors.

The first studies to identify demographic differences in the organizational stressors encountered by sport performers (Woodman & Hardy, 2001; Fletcher & Hanton, 2003) sampled both males and females and, in going beyond the original aims of the research, observed that the demand of nutrition (e.g., coach's attitudes towards nutrition) varied between the genders. Nicholls, Polman, Levy, Taylor, and Cobley (2007) also found variation in organizational stressors between sport performers of different genders, as well as across those competing in different sports and at different performance levels. Specifically, they found that males reported more stressors relating to injuries, whereas females reported more communication and team-mate related stressors. For sport type, Nicholls et al. (2007) found that performers competing in individual sports reported more training and coach related stressors, whereas those in team sports raised more selection related stressors. Turning to performance level, they found that sport performers competing at higher performance levels encountered more coaching and training related stressors than their lower level counterparts. Mellalieu et al. (2009) also found performance level differences, with nutritional stressors (e.g., not eating properly, lack of nutrition) only being highlighted by non-elite performers, and facilities and equipment stressors (e.g., not preparing on the competition facility, poor technical set-up of performance equipment) identified solely by elite performers. These studies offer a promising start to examining demographic differences by identifying variations in organizational stressors across sport performers. To further develop this line of inquiry, researchers should recruit a diverse sample of sport performers and explicitly examine variation across a number of organizational stressors.

In accordance with this observation, Fletcher, Hanton, Mellalieu et al. (2012) directly compared the organizational stressors that six elite and six non-elite sport performers encountered. The results highlighted that elite performers encounter proportionately more organizational stressors than their non-elite counterparts (elite performer number of organizational stressors = 315, non-elite = 228), with issues such as travel, accommodation, funding, and the media emerging as more prevalent stressors for individuals competing at higher levels. Fletcher, Hanton, Mellalieu et al.'s (2012) study provides important implications for professional practice, specifically encouraging applied sport psychologists to be cognizant of performers' different abilities and tailor their stress management interventions accordingly. Notwithstanding this recommendation, their research has limited generalizability because it focused on the subjective perceptions of a relatively small sample. Future research should not only recruit larger samples, but also extend Fletcher, Hanton, Mellalieu et al.'s (2012) study focus beyond performance level to investigate if differences in organizational stressors exist as a function of sport performers' gender, sport type, age, and length of time competing.

To investigate a comprehensive range of organizational stressors that are reported by a larger sample of sport performers and examine if such stressors vary as a function of demographic differences, researchers require a valid and reliable measure (cf. Arnold & Fletcher, 2012a; Fletcher et al., 2006). The development and validation of the Organizational Stressor Indicator for Sport Performers (OSI-SP; Arnold, Fletcher, & Daniels, 2013) has enabled such assessment. Specifically, the OSI-SP measures how sport performers' stress experiences vary by assessing the multidimensional nature of the organizational stressors that they encounter. Therefore, via the use of the OSI-SP, the purpose of this study is to examine if the frequency, intensity, and duration of the organizational stressors that sport performers encounter vary as a

function of demographic differences. Due to the exploratory nature of this research question, no specific hypotheses are formulated.

## **Materials and Methods**

### **Participants**

A diverse sample of participants were recruited to ensure variability in gender, sport type, performance level, age, and length of time competing. The sample consisted of 1277 sport performers (646 males, 631 females). They were aged between 18-78 years ( $M_{\text{age}} = 25.79$ ,  $SD = 10.34$ ), collectively represented 45 sports, and had been competing at performance levels ranging from club to international for between two months and 65 years ( $M = 11.58$  years,  $SD = 8.64$ ).

### **Procedure**

Following institutional ethical approval, sport performers were contacted and invited to participate. Participants were recruited by contacting performers directly or via enquiries with coaches, clubs, sport organizations, universities, and event organizers. Before data collection began, participants were informed that any personally identifiable information would be kept strictly confidential and, apart from the researchers, no one would have access to any personal responses. Participants signed an informed consent sheet prior to participating in the study. Data collection occurred using online ( $n = 703$ ) and paper ( $n = 574$ ) versions of the OSI-SP<sup>1</sup>.

### **Measure**

**Organizational Stressor Indicator for Sport Performers (OSI-SP; Arnold et al., 2013).** The 23-item OSI-SP was distributed to participants to assess the organizational stressors they had encountered as part of their participation in competitive sport in the past month. The instructions at the start of the indicator informed the participants that they should be honest and open, and that those representing more than one team should complete the OSI-SP with reference



to the team they had most frequently competed for in the past month. The five subscales on the OSI-SP are: Goals and Development (six items; example: “the development of my sporting career”), Logistics and Operations (nine items; example: “travelling to or from training or competitions”), Team and Culture (four items; example: “the atmosphere surrounding my team”), Coaching (two items; example: “my coach’s personality”), and Selection (two items; example: “how my team is selected”). For all of the items, the stem “In the past month, I have experienced pressure associated with...” is provided, to which participants respond on three separate 6-point Likert rating scales: frequency (“how often did this pressure placed a demand on you?”; 0 = *never*, 5 = *always*), intensity (“how demanding was this pressure?”; 0 = *no demand*, 5 = *very high*), and duration (“how long did this pressure place a demand on you for?”; 0 = *no time*, 5 = *a very long time*). The OSI-SP was developed and validated via a series of four related studies (Arnold et al., 2013), with support provided for its internal consistency (Cronbach’s alpha coefficients ranged from .75 to .85 for the frequency scales, .71 to .83 for the intensity scales, and .74 to .83 for the duration scales) and content, concurrent, discriminant, and factorial validity.

### **Data Analysis**

The participants were split into groups according to their gender, sport type, and performance level. For gender, 646 males formed Group 1 and 631 females formed Group 2. For sport type, Group 1 (n = 408) were team sport performers (e.g., lacrosse, netball, rugby), Group 2 (n = 597) were individual sport performers (e.g., boxing, fencing, triathlon), and Group 3 (n = 272) were performers from sports that could be either team or individual based (e.g., badminton, rowing, tennis). For performance level, Group 1 (n = 379) were participants who competed at national or international level, Group 2 (n = 400) competed at regional or university level, and

Group 3 ( $n = 498$ ) competed at county or club level.

Six separate multivariate analyses of covariance (MANCOVAs) were conducted to examine the effects of demographic differences on the organizational stressors that sport performers encounter. The dependent variables were the frequency of Goals and Development, Logistics and Operations, Team and Culture, Coaching, and Selection factors in the first MANCOVA, the intensity of these factors in the second, and duration in the third. The demographic differences examined were gender, sport type, and performance level. The age of participants and the length of time they had been competing in sport were both continuous variables and could be related to the outcome variables; therefore, they were included as covariates in the analyses (Field, 2009). Age and length of time competing represent proxies for experience and knowledge gained in coping with or eliminating stressors (Sturman, 2003); thus, we may expect to see progressively better adaptation to stressors over time as experience and knowledge accumulates. As a result, the MANCOVAs were conducted with both linear and curvilinear effects of age and length of time competing to represent the accumulation of experience (linear trend) and progressive capitalization of acquired knowledge (curvilinear trend). As recommended (cf. Cohen, Cohen, West, & Aiken, 2003), curvilinear effects were dealt with by converting the original age and length competing values to standardized  $z$ -scores, squaring them to calculate their curvilinear terms, and entering both linear and curvilinear terms in the analyses. A conservative significance value of  $p < .01$  was adopted because of the large sample size in this study, and any significant MANCOVAs were followed up with an analysis of variance (ANOVA). Post hoc Tukey tests were chosen to explore any significant effects between groups.

## Results

### Preliminary Analyses

No variable in the OSI-SP had >5% missing data; therefore, missing data were assumed to be missing at random (cf. Tabachnick & Fidell, 2001). The expectation maximization algorithm was used to impute missing values. The univariate skewness values of the 23 items ranged from -.05 to 2.12 and the univariate kurtosis values ranged from -1.19 to 4.20.

### Main Analyses

The covariates (age and length competing) were significantly related to the frequency (age  $\Lambda = .93$ ,  $F(5, 1249.00) = 19.38$ ; length competing  $\Lambda = .95$ ,  $F(5, 1249.00) = 13.85$ ), intensity (age  $\Lambda = .94$ ,  $F(5, 1249.00) = 17.45$ ; length competing  $\Lambda = .96$ ,  $F(5, 1249.00) = 10.65$ ), and duration (age  $\Lambda = .92$ ,  $F(5, 1249.00) = 22.19$ ; length competing  $\Lambda = .95$ ,  $F(5, 1249.00) = 12.92$ ) (all  $ps < .001$ ) of the organizational stressor factors. There was no evidence for curvilinear effects of the covariates on the frequency (age  $\Lambda = .99$ ,  $F(5, 1247.00) = 1.43$ ,  $p = .213$ ; length competing  $\Lambda = .99$ ,  $F(5, 1247.00) = 1.44$ ,  $p = .209$ ), intensity (age  $\Lambda = 1.00$ ,  $F(5, 1247.00) = 1.02$ ,  $p = .405$ ; length competing  $\Lambda = 1.00$ ,  $F(5, 1247.00) = .78$ ,  $p = .567$ ), or duration (age  $\Lambda = 1.00$ ,  $F(5, 1247.00) = .93$ ,  $p = .462$ ; length competing  $\Lambda = 1.00$ ,  $F(5, 1247.00) = .99$ ,  $p = .424$ ) of the organizational stress factors.

After controlling for the effects of the covariates, there was a significant main effect of gender (frequency  $\Lambda = .97$ ,  $F(5, 1249.00) = 6.96$ ; intensity  $\Lambda = .97$ ,  $F(5, 1249.00) = 8.54$ ; duration  $\Lambda = .97$ ,  $F(5, 1249.00) = 7.25$ ) (all  $ps < .001$ ), sport type (frequency  $\Lambda = .96$ ,  $F(10, 2498.00) = 5.13$ ; intensity  $\Lambda = .96$ ,  $F(10, 2498.00) = 5.34$ ; duration  $\Lambda = .96$ ,  $F(10, 2498.00) = 5.33$ ) (all  $ps < .001$ ), and performance level (frequency  $\Lambda = .91$ ,  $F(10, 2498.00) = 12.15$ ; intensity  $\Lambda = .91$ ,  $F(10, 2498.00) = 11.73$ ; duration  $\Lambda = .92$ ,  $F(10, 2498.00) = 10.35$ ) (all  $ps <$

.001) on the organizational stressor factors. In the following sections, only significant univariate results are discussed.

### **Gender.**

**Logistics and Operations factor.** Separate univariate ANOVAs on the outcome variables revealed significant effects of gender on logistics and operations frequency ( $F(1, 1253.00) = 5.60$ ), intensity ( $F(1, 1253.00) = 6.04$ ), and duration ( $F(1, 1253.00) = 5.29$ ) (all  $ps < .001$ ). Specifically, post hoc analyses revealed that males encountered a significantly higher frequency ( $M = 1.11, SD = .03$ ), intensity ( $M = 1.17, SD = .03$ ), and duration ( $M = 1.10, SD = .03$ ) of logistics and operations organizational stressors than females (frequency  $M = .96, SD = .04$ ; intensity  $M = 1.01, SD = .04$ ; duration  $M = .95, SD = .04$ ) ( $p < .001$ ) (see Figure 1).

**Selection factor.** Separate univariate ANOVAs on the outcome variables revealed significant effects of gender on the frequency ( $F(1, 1253.00) = 13.61, p = .005$ ), intensity ( $F(1, 1253.00) = 25.07, p < .001$ ), and duration ( $F(1, 1253.00) = 10.36, p = .012$ ) of selection organizational stressors. Specifically, post hoc analyses revealed that females encountered a significantly higher frequency ( $M = 1.97, SD = .07$ ), intensity ( $M = 2.16, SD = .07$ ), and duration ( $M = 1.90, SD = .06$ ) of selection organizational stressors than males (frequency  $M = 1.73, SD = .06, p = .005$ ; intensity  $M = 1.83, SD = .06, p < .001$ ; duration  $M = 1.69, SD = .05, p = .012$ ) (see Figure 1).

### **Sport type.**

**Logistics and Operations factor.** Separate univariate ANOVAs on the outcome variables revealed significant effects of sport type on logistics and operations frequency ( $F(2, 1253.00) = 4.33$ ), intensity ( $F(2, 1253.00) = 3.74$ ), and duration ( $F(2, 1253.00) = 3.69$ ) (all  $ps < .001$ ). Specifically, performers competing in individual sports encountered a significantly lower

frequency ( $M = .92$ ,  $SD = .03$ ,  $p < .001$ ), intensity ( $M = .98$ ,  $SD = .03$ ,  $p < .001$ ), and duration ( $M = .92$ ,  $SD = .03$ ,  $p = .009$ ) of logistics and operations organizational stressors than those competing in team (frequency  $M = 1.10$ ,  $SD = .04$ ; intensity  $M = 1.14$ ,  $SD = .04$ ; duration  $M = 1.05$ ,  $SD = .04$ ) and team and individual based sports (frequency  $M = 1.09$ ,  $SD = .05$ ; intensity  $M = 1.15$ ,  $SD = .05$ ; duration  $M = 1.12$ ,  $SD = .05$ ) (see Figure 2).

**Team and Culture factor.** Separate univariate ANOVAs on the outcome variables revealed significant effects of sport type on the frequency ( $F(2, 1253.00) = 18.94$ ), intensity ( $F(2, 1253.00) = 21.38$ ), and duration ( $F(2, 1253.00) = 18.19$ ) (all  $ps < .001$ ) of team and culture organizational stressors. Specifically, post hoc analyses revealed that sport performers competing in individual sports encountered a significantly lower frequency ( $M = 1.43$ ,  $SD = .05$ ), intensity ( $M = 1.47$ ,  $SD = .05$ ), and duration ( $M = 1.40$ ,  $SD = .05$ ) (all  $ps < .001$ ) of team and culture organizational stressors than those competing in team (frequency  $M = 1.84$ ,  $SD = .06$ ; intensity  $M = 1.89$ ,  $SD = .06$ ; duration  $M = 1.79$ ,  $SD = .06$ ) and team and individual based sports (frequency  $M = 1.70$ ,  $SD = .08$ ; intensity  $M = 1.82$ ,  $SD = .08$ ; duration  $M = 1.71$ ,  $SD = .08$ ) (see Figure 2).

**Selection factor.** Separate univariate ANOVAs on the outcome variables revealed significant effects of sport type on the frequency ( $F(2, 1253.00) = 21.07$ ), intensity ( $F(2, 1253.00) = 24.92$ ), and duration (sport type  $F(2, 1253.00) = 21.88$ ) (all  $ps < .001$ ) of selection organizational stressors. Specifically, the results highlighted that sport performers competing in individual sports encountered a significantly lower frequency ( $M = 1.59$ ,  $SD = .06$ ), intensity ( $M = 1.71$ ,  $SD = .06$ ), and duration ( $M = 1.53$ ,  $SD = .06$ ) of selection organizational stressors than those competing in team (frequency  $M = 1.97$ ,  $SD = .07$ ; intensity  $M = 2.07$ ,  $SD = .07$ ; duration  $M = 1.96$ ,  $SD = .07$ ) and team and individual based sports (frequency  $M = 1.99$ ,  $SD = .09$ ;

intensity  $M = 2.21$ ,  $SD = .09$ ; duration  $M = 1.89$ ,  $SD = .09$ ) (all  $ps < .001$ ) (see Figure 2).

### **Performance level.**

**Goals and Development factor.** Separate univariate ANOVAs on the outcome variables revealed significant effects of performance level on goals and development frequency ( $F(2, 1253.00) = 18.35$ ), intensity ( $F(2, 1253.00) = 27.23$ ), and duration ( $F(2, 1253.00) = 21.14$ ) (all  $ps < .001$ ). Specifically, post hoc analyses revealed that sport performers competing at national or international level encountered a significantly higher frequency ( $M = 2.33$ ,  $SD = .06$ ), intensity ( $M = 2.51$ ,  $SD = .06$ ), and duration ( $M = 2.38$ ,  $SD = .06$ ) of goals and development organizational stressors than those competing at regional or university (frequency  $M = 2.04$ ,  $SD = .05$ ; intensity  $M = 2.20$ ,  $SD = .06$ ; duration  $M = 2.11$ ,  $SD = .05$ ) and county or club level (frequency  $M = 1.83$ ,  $SD = .05$ ; intensity  $M = 1.90$ ,  $SD = .05$ ; duration  $M = 1.84$ ,  $SD = .05$ ) ( $p < .001$ ) (see Figure 3). Furthermore, those competing at regional or university level encountered a significantly higher frequency, intensity, and duration of goals and development organizational stressors than those competing at county or club level ( $p < .001$ ) (see Figure 3).

**Logistics and Operations factor.** Separate univariate ANOVAs on the outcome variables revealed significant effects of performance level on logistics and operations frequency ( $F(2, 1253.00) = 22.20$ ), intensity ( $F(2, 1253.00) = 22.34$ ), and duration ( $F(2, 1253.00) = 18.53$ ) (all  $ps < .001$ ). Specifically, sport performers competing at national or international level encountered a significantly higher frequency ( $M = 1.36$ ,  $SD = .05$ ), intensity ( $M = 1.41$ ,  $SD = .05$ ), and duration ( $M = 1.32$ ,  $SD = .05$ ) of logistics and operations organizational stressors than those competing at regional or university (frequency  $M = .89$ ,  $SD = .04$ ; intensity  $M = .95$ ,  $SD = .04$ ; duration  $M = .89$ ,  $SD = .04$ ) and county or club level (frequency  $M = .86$ ,  $SD = .04$ ; intensity  $M = .90$ ,  $SD = .04$ ; duration  $M = .87$ ,  $SD = .04$ ) (all  $ps < .001$ ) (see Figure 3).

**Team and Culture factor.** Separate univariate ANOVAs on the outcome variables revealed significant effects of performance level on the intensity of team and culture organizational stressors ( $F(2, 1253.00) = 7.68, p < .001$ ). Specifically, sport performers competing at national or international level encountered a significantly higher intensity ( $M = 1.88, SD = .07, p < .001$ ) of these organizational stressors than those competing at county or club level ( $M = 1.56, SD = .06$ ) (see Figure 3).

**Coaching factor.** Separate univariate ANOVAs on the outcome variables revealed significant effects of performance level on the frequency ( $F(2, 1253.00) = 17.88$ ), intensity ( $F(2, 1253.00) = 21.21$ ), and duration ( $F(2, 1253.00) = 15.82$ ) (all  $ps < .001$ ) of coaching organizational stressors. Specifically, post hoc analyses revealed that sport performers competing at national or international level encountered a significantly higher frequency ( $M = 1.66, SD = .08$ ), intensity ( $M = 1.78, SD = .08$ ), and duration ( $M = 1.63, SD = .08$ ) of coaching organizational stressors than those competing at regional or university (frequency  $M = 1.34, SD = .07, p < .001$ ; intensity  $M = 1.43, SD = .07, p < .001$ ; duration  $M = 1.37, SD = .07, p = .010$ ) and county or club level (frequency  $M = 1.17, SD = .06$ ; intensity  $M = 1.25, SD = .07$ ; duration  $M = 1.17, SD = .07$ ) (all  $ps < .001$ ) (see Figure 3).

**Selection factor.** Separate univariate ANOVAs on the outcome variables revealed significant effects of performance level on the frequency ( $F(2, 1253.00) = 10.23$ ) and intensity ( $F(2, 1253.00) = 21.43$ ) (all  $ps < .001$ ) of selection organizational stressors. Specifically, it was found that sport performers competing at county or club level encountered a significantly lower frequency ( $M = 1.65, SD = .07$ ) and intensity ( $M = 1.69, SD = .07$ ) of selection organizational stressors than those competing at regional or university level (frequency  $M = 1.99, SD = .07$ ; intensity  $M = 2.14, SD = .08$ ), and a significantly lower intensity than those competing at

national or international level ( $M = 2.15$ ,  $SD = .09$ ) (all  $ps < .001$ ) (see Figure 3).

### **Discussion**

Organizational stressors are particularly prevalent across sport performers' experiences and can influence their performance, health, and well-being. Although much is known about which organizational stressors are encountered by sport performers, sport psychology researchers, to date, have afforded limited attention to investigating how these demands vary according to demographic differences. This study sought to address this issue, by examining if the frequency, intensity, and duration of organizational stressors that sport performers encounter vary as a function of their gender, sport type, and performance level. The findings show that demographic differences do affect organizational stressors (see Figures 1-3). The following three sections will discuss the effects associated with each of the demographic difference variables examined.

#### **Gender**

The findings illustrate that a sport performer's gender influences the organizational stressors that he or she encounters. Specifically, it was found that males encounter a significantly higher frequency, intensity, and duration of logistics and operations organizational stressors than females, and that females encounter a significantly higher frequency, intensity, and duration of selection organizational stressors than males. This finding extends previous literature in this area, which has indicated gender differences in the nutrition, injury, team mate, and communication stressors that sport performers encounter (Woodman & Hardy, 2001; Fletcher & Hanton, 2003; Nicholls et al., 2007).

In occupational stress research, Jick and Mitz (1985) have developed a model to illustrate the potential impact of sex/gender on the stressors that an individual encounters. The structural



explanation within the model suggests that females are socialized and encouraged to be more socially oriented and express emotions and, in doing so, are more likely than males to perceive socially related stressors and report feelings of an unpleasant nature (Tamres, Janicki, & Hegelson, 2002). Therefore, with reference to the present findings on selection stressors, which are socially related and can create unpleasant emotions (cf. Fletcher, Hanton, & Wagstaff, 2012), it is likely that female performers will typically perceive such stressors and express their feelings associated with these demands, whereas male performers will to a lesser extent. Alternatively, the gender findings may be understood by the social/psychological explanation within the model (cf. Jick & Mitz, 1985). This explanation suggests that males' and females' internal responses (e.g., cognitive appraisals, coping strategies) are different when encountering stressors. For example, research on coping has found that male performers typically adopt problem-focused coping to address stressors, whereas female performers tend to utilize emotion-focused coping (Nicholls & Polman, 2007). In view of the social/psychological explanation and this research, the findings on gender could be explained by performers being oriented to perceive the stressors that are more amendable to the style of coping that their respective gender typically adopts. To elaborate, it may be the case that male performers perceive the more controllable logistics and operations stressors, since problem-focused coping relies on an individual being able to have an influence on a stressor, whereas female performers perceive the less controllable selection stressors because emotion-focused coping does not require an individual to change their surrounding environment (cf. Dewe, O'Driscoll, & Cooper, 2010).

**Sport Type**

In this study, it was found that performers competing in team-based sports encounter a higher frequency, intensity, and duration of logistics and operations organizational stressors than

those competing in individual based sports. To explain, it is likely that as the size of a group increases from one individual sport performer to a whole team, the procedures for the group (e.g., travel, accommodation, training and competition organization) become more complex. This is in accordance with business management research (cf. Hornsby & Kuratko, 1990; Orger, Hogarth-Scott, & Riding, 2000) which highlights that as the size of a firm increases the personnel and practices employed become more sophisticated, which has implications for the severity of managerial problems.

A second finding in relation to a performer's sport type, which is in line with previous sport psychology research (cf. Nicholls et al., 2007) and as would be intuitively expected, was that performers who spend more time with peers (e.g., those competing in team-based sports) report more team and culture related stressors. The results also demonstrate that team-based sport performers encounter a higher frequency, intensity, and duration of selection related organizational stressors than those in individual sports. This sport type difference could be explained by the amount of perceived control that a performer has over their stressors (cf. Jones & Fletcher, 1996; Creed & Bartrum, 2008). Indeed, Noblet et al. (2003) found that those who perceive less job control (e.g., team sport performers who are typically subjectively selected compared to others) experience greater dissatisfaction than those that have more control over their job (e.g., individual sport performers who are typically selected against a more objective, controllable measure, such as a time or a target).

### **Performance Level**

From the findings it is evident that sport performers competing at higher performance levels (e.g., national or international level) typically experience organizational stressors more frequently, at a higher intensity, and for a longer duration than those competing at lower levels

(e.g., regional or university and county or club level). This difference could be explained by higher level performers being exposed to more organizational stressors and/or perceiving them differently. Firstly, sport performers competing at higher performance levels are often required to travel both nationally and internationally; therefore, encountering demands such as travel, accommodation, and funding more than their lower level counterparts (Fletcher, Hanton, Mellalieu et al., 2012). Such travel means that these performers often train and compete in different environments and spend greater amounts of time with their coach and/or team mates than those competing at lower levels, who may not even have a coach and are likely to travel less frequently and spend less time in a competitive environment with team mates. This exposure of higher level performers to novel environments and heightened interactions with coaches and/or team mates could explain why they encounter higher dimensions of logistics and operations, coaching, and team and culture organizational stressors than those competing at lower levels. In accordance with this, research on sport performers' appraisals has found that the novelty of a stressful situation and self and other comparisons with team mates are antecedents of stress (cf. Didymus & Fletcher, 2012; Thatcher & Day, 2008; see also Hanton, Wagstaff, & Fletcher, 2012; Didymus & Fletcher, 2014).

An alternative explanation might be that sport performers competing at higher levels experience heightened organizational stressors because of the way they perceive them. For example, performers competing at higher levels in sport typically demonstrate intense commitment and great investment to achieve their personal goals (Mallett & Hanrahan, 2004). Therefore, if a situation or event arises which can threaten such goals (e.g., selection or goals and development organizational stressors), higher level performers may experience a greater effort-reward imbalance (cf. Siegrist, 2002) and, subsequently, perceive and report higher dimensions

of such stressors than lower level performers.

### **General Conclusions**

A strength of this study was the large and diverse sample of sport performers that were recruited. This sampling enabled a comprehensive first study examining the effects of demographic differences on the dimensions of organizational stressors. Notwithstanding this strength, it is important to recognize limitations and the future research directions that emerge as a result. Firstly, performance level was analyzed in this study; however, some researchers have contended that this variable does not take amount of experience or the many different facets of expertise (e.g., physical, technical, cognitive, emotional) into consideration (Wrisberg, 1993; Janelle & Hillman, 2003). For example, there may be some sport performers who are elevated to a high performance level due to a sudden improvement but still lack competitive experience (Mellalieu, Hanton, & O'Brien, 2004). Although the age of performers and the length of time they had been competing were controlled as covariates in the present study, future researchers should develop more sophisticated classifications of performance level, sporting experience, and athletic expertise. A further line of inquiry for scholars to investigate is whether, in accordance with theory, certain personal (e.g., personality, self-confidence) and situational (e.g., social support, autonomy) variables not only influence the organizational stressors encountered, but also moderate the relationships between these demands and subsequent components of the stress process (see, for a review, Fletcher et al., 2006). Indeed, as highlighted in the introduction, these personal and situational characteristics may have a moderating influence at the person-environment and emotion-performance stages of the stress process (Fletcher et al., 2006). An additional limitation of the study was that data was collected at an individual level only; therefore, it was not possible to examine relationships between different team member's stress

experiences. Although this design was appropriate for the present study, future research should adopt more complex approaches to examine if the stress experience of one individual might be transmitted to others in a group, a phenomenon which has been referred to as *stress contagion* (cf. Jones & Fletcher, 1993; Wethington, 2000). This line of inquiry is particularly important in the area of organizational stress because research has found that some of these demands can be peripheral and only experienced by a few individuals in an organization (cf. Arnold & Fletcher, 2012b); thus meaning that stress contagion can increase the incidence of these stress experiences and the undesirable consequences that can accompany them.

From an applied perspective, the findings of this study can enhance sport psychology practitioners' knowledge of demographic differences in organizational stressors, so that, ultimately, more appropriate stress management interventions can be delivered. For example, it is suggested that practitioners develop preventative primary stress management interventions (PSMIs; Cox, 1993; Fletcher et al., 2006; Cox, Taris, & Nielson, 2010) to either eliminate or reduce logistics and operations organizational stressors when working with males and selection stressors for females. Furthermore, PSMIs can be used when working with team-based or elite sport performers to address the heightened dimensions of stressors encountered by these two groups. Alternatively, practitioners can help these sport performers to expand their repertoire of stress management techniques so that they can lower the intensity of, and better cope with these stressors (for example interventions and techniques, see Rumbold et al., 2012). To further develop a performer's stress management skills, the findings of the present study could be used to inform the planning and implementation of *stress inoculation training* (cf. Meichenbaum, 1985; Mace & Carroll, 1986). Specifically, this training involves exposing a performer to appropriate and progressively demanding stressors in a supportive and controllable environment

so that they can develop resilience and practice his or her stress management. If practitioners, however, wish to reduce the intensity of stressors, they should look to enhance sport performers' perceived control over the demands they encounter. This suggestion is in accordance with the Job Strain Model (cf. Karasek, 1979; Karasek, Baker, Marxer, Anibom, & Theorell, 1981), which proposes that the risk of psychological and physical illness can be reduced if the demand of a situation does not exceed an individual's level of control. To optimize levels of control, leaders, managers, and coaches can give more control and discretion to individuals through clear goals, role clarification, and autonomy (Ivancevich & Ganster, 2014). An example of optimizing control can be seen in the manufacturing industry (cf. Gagné & Bhave, 2011), whereby employers have provided individuals with several forms of control, namely timing control (e.g., work schedules), method control (e.g., discretion in undertaking tasks) and boundary control (e.g., control over secondary activities such as ordering supplies). Enhancing perceptions of control is important, not only for reducing the intensity of stressors, but also for enhancing satisfaction, commitment, involvement, performance, and motivation, and lowering emotional distress, absenteeism, and turnover (Spector, 1986).

### **Perspective**

To provide perspective, this study has recruited a large and diverse sample of sport performers to investigate the effects of demographic differences on the dimensions of a comprehensive range of organizational stressors. This is in contrast to previous research in the area, which has typically recruited relatively homogenous and small samples to identify some of the organizational stressors encountered by sport performers. The findings further theory in the area by illustrating the demographic variables (personal characteristics) that affect the dimensions of organizational stressors, as well as providing an impetus for future research

examining additional moderating variables of the stress process. The findings also provide important implications for practitioners, who are often required to tailor the content of interventions according to the characteristics of their clients. Specifically, this study can help more appropriate interventions be designed so that, ultimately, the negative consequences of stress can be reduced and an individual's well-being and sporting performances enhanced.

## Footnote

<sup>1</sup> In accordance with guidelines in this area (cf. Lonsdale, Hodge, & Rose, 2006), we adopted a sequential model testing approach via multisample Confirmatory Factor Analysis (CFA) to examine whether the measurement models for paper and online methods were invariant. The results highlighted that the change in Comparative Fit Index (CFI) values were  $\leq .01$  in all the analyses (cf. Cheung & Rensvold, 2002); therefore, supporting the equality of factor loadings, variances, and covariances on the SEQ across paper and online methods of data collection. As a result, paper and online data were merged before the analyses.



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Table 1: *Sample Composition in Organizational Stress Literature: Gender*

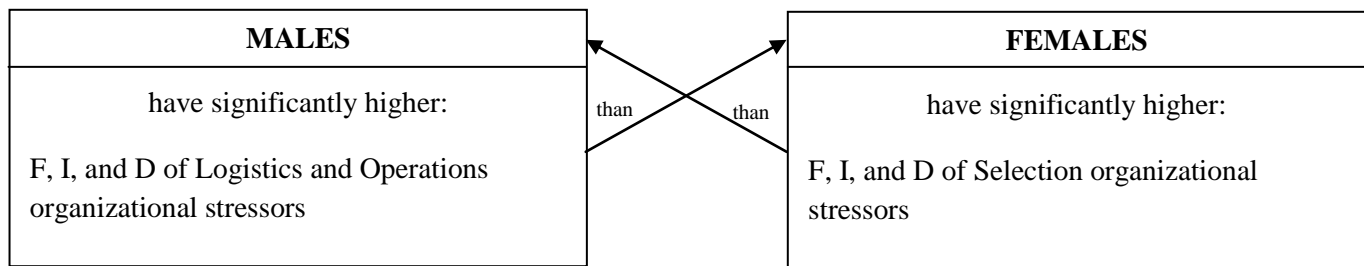
Sample Composition	Author(s)
Male Participants	Cohn, 1990; Anshel & Wells, 2000; Giacobbi, Foore, & Weinberg, 2004; Hanton, Fletcher, & Coughlan, 2005; Nicholls, Holt, Polman, & James, 2005; Thelwell, Weston, & Greenlees, 2005; Nicholls, Holt, Polman, & Bloomfield, 2006; Thelwell, Weston, & Greenlees, 2007; Nicholls, Jones, Polman, & Borkoles, 2009; Reeves, Nicholls, & McKenna, 2009; Weston, Thelwell, Bond, & Hutchings, 2009
Female Participants	Holt & Hogg, 2002; Giacobbi, Lynn, Wetherington, Jenkins, Bodendorf, & Langley, 2004; Devonport, Biscomb, Lane, Mahoney, & Cassidy, 2005
Male and Female Participants	Scanlan, Stein, & Ravizza, 1991; Gould, Jackson, & Finch, 1993; Gould, Udry, Bridges, & Beck, 1997; James & Collins, 1997; Gould, Guinan, Greenleaf, Medbery, & Peterson, 1999; McKay, Niven, Lavallee, & White, 2008; Kaiseler, Polman, & Nicholls, 2009; Kristiansen & Roberts, 2010

Table 2: *Sample Composition in Organizational Stress Literature: Sport Type*

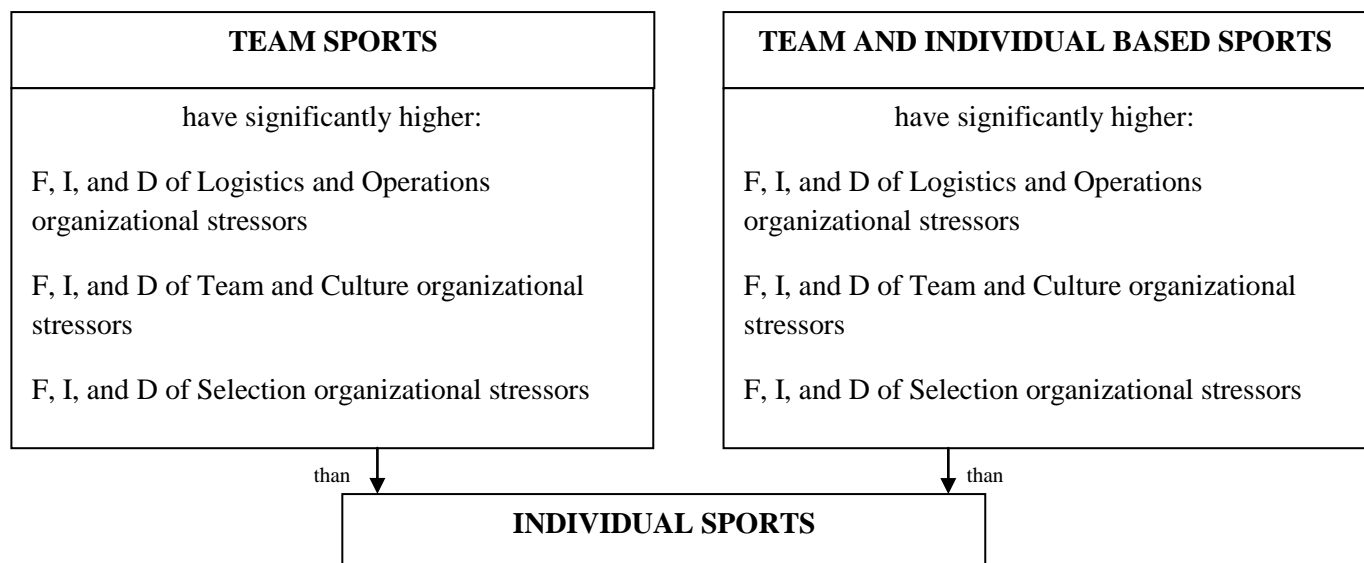
Sample Composition	Author(s)
Australian Football	Noblet & Gifford, 2002
Basketball	Anshel & Wells, 2000
Cricket	Thelwell, Weston, & Greenlees, 2005, 2007
Golf	Cohn, 1990; Giacobbi, Foore, & Weinberg, 2004; Nicholls, Holt, Polman, & James, 2005
Netball	Devonport, Biscomb, Lane, Mahoney, & Cassidy, 2005
Rugby Union	Nicholls, Holt, Polman, & Bloomfield, 2006; Nicholls, Jones, Polman, & Borkoles, 2009
Sailing	Weston, Thelwell, Bond, & Hutchings, 2009
Soccer	Holt & Hogg, 2002; Reeves, Nicholls, & McKenna, 2009
Swimming	Giacobbi, Lynn, Wetherington, Jenkins, Bodendorf, & Langley, 2004
Wrestling	Gould, Eklund, & Jackson, 1992a, 1992b
Performers from Different Sports	James & Collins, 1997; Dugdale, Eklund, & Gordon, 2002; Kristiansen & Roberts, 2010

Table 3: *Sample Composition in Organizational Stress Literature: Competitive Level*

Sample Composition	Author(s)
High School	Cohn, 1990
Club	Anshel & Wells, 2000; Noblet & Gifford, 2002; Reeves, Nicholls, & McKenna, 2009
University/Collegiate	Giacobbi, Lynn, Wetherington, Jenkins, Bodendorf, & Langley, 2004
Junior National	Devonport, Biscomb, Lane, Mahoney, & Cassidy, 2005
International	Gould, Eklund, & Jackson, 1992a; 1992b; Holt & Hogg, 2002; Hanton, Fletcher, & Coughlan, 2005; Nicholls, Holt, Polman, & James, 2005
Professional	Nicholls, Holt, Polman, & Bloomfield, 2006; Nicholls, Jones, Polman, & Borkoles, 2009; Thelwell, Weston, & Greenlees, 2005, 2007; Weston, Thelwell, Bond, & Hutchings, 2009
Performers from Different Levels	James & Collins, 1997; Holt & Dunn, 2004; McKay, Niven, Lavallee, & White, 2008; Kaiseler, Polman, & Nicholls, 2009



*Figure 1.* The summary results diagram displaying how organizational stressors vary according to a sport performer's gender. F = frequency; I = intensity; D = duration.



*Figure 2.* The summary results diagram displaying how organizational stressors vary according to a sport performer's sport type. F = frequency; I = intensity; D = duration.



*Figure 3.* The summary results diagram displaying how organizational stressors vary according to a sport performer's performance level. F = frequency; I = intensity; D = duration.